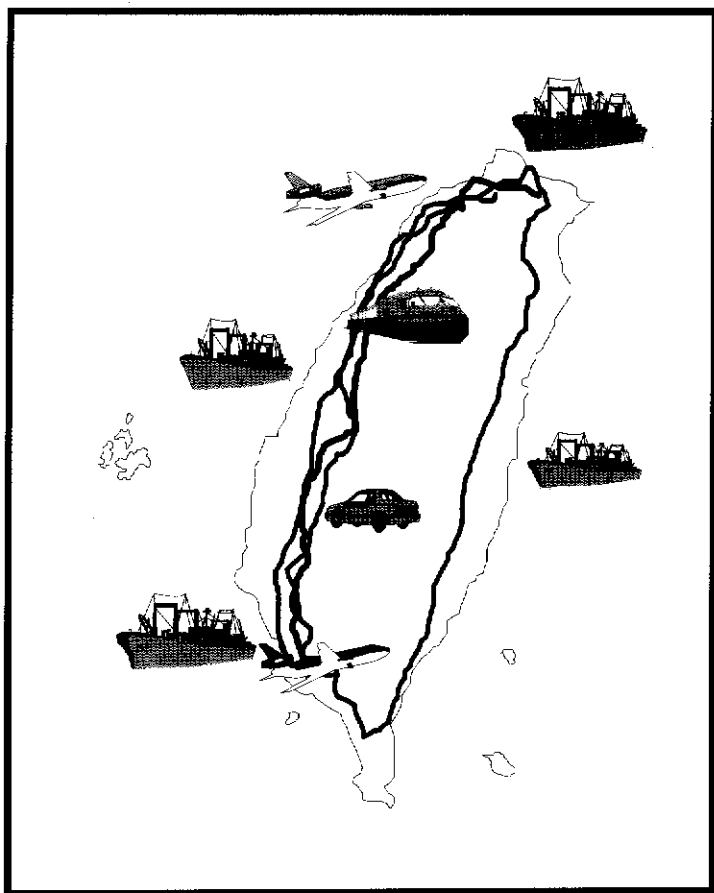


TRANSPORTATION POLICY WHITE BOOK

Briefing



Institute of Transportation
Ministry of Transportation and Communications
Republic of China
May 1996

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Words from the Minister

Transportation is the backbone of economic development and international competitiveness. As we face the challenges of rapid changes in international circumstances, socio-economic pattern, technology development, and financial situation, we need a clear transportation policy to guide our directions of planning, development and management in areas of land, air, and sea transportation.

To develop Taiwan into an Asia-Pacific regional operations center is our national development plan. The development of sea transportation, air transportation and telecommunication centers, which Ministry of Transportation and Communications is responsible for, is the key to the success of the plan. Since every household and every business is depending on transportation everyday, a safe, efficient, and sustainable transportation system is vital for the movement of passengers, and cargoes. Therefore, the preparation of transportation policy should be based both on the national development plan and people's needs.

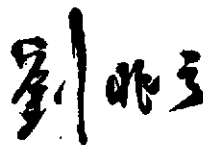
The transportation agency has long been criticized for the absence of clear and comprehensive transportation policy. It is time to take a new look at the existing transportation planning development and management, and to integrate them. That is why we decided to prepare and publish this Transportation Policy White Book.

This White Book covers the issues, policies, strategies and even major measures for international transportation, intercity transportation, urban transportation, suburban and rural transportation, transportation safety, and transportation environment and technology. It takes more than one year to accomplish. During the preparation process, several transportation seminars and national transportation meeting were conducted to elicit the views of transportation experts, users, and providers as well as local governments.

The publication of this Transportation Policy White Book is not the

end but the beginning. It is expected to serve as long-term guidelines for our government's transportation policies, and as a lasting reference for transportation providers and users, as well as an ongoing document that responds to ever-changing transportation needs.

Minister of Transportation and Communications

A handwritten signature in black ink, consisting of stylized Chinese characters. The characters appear to be '劉世勳' (Liu Shi-xun), which is the name of Chao-Shiuan Liu.

Chao-Shiuan Liu

The Purpose

The transportation agency in Taiwan has long been criticized for the absence of a clear, comprehensive, and consistent transportation policy. The questions of whether major transportation infrastructures meet national goals and people's needs, and whether they conflict with each other within constraints of limited resources, are often asked. Facing these existing issues and external changing environments, we need a comprehensive, consistent, and continuous transportation policy to move Taiwan into the 21st century.

Transportation policy can be viewed as a guideline of decision framework for government, industry, and the public. The major purposes of this Transportation Policy White Book are to

- (1) *declare government's transportation policies,*
- (2) *establish the corresponding transportation strategies and major measures, and*
- (3) *earn people's recognition.*

Policy Scope

This book covers the movement of passenger, cargo, and information for different modes of land, sea, and air transportation. It is also discussed in terms of transportation markets, that is, the international, intercity, urban, suburban and rural transportation market (Figure 1).

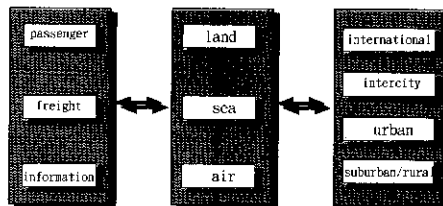


Figure 1. Scope of transportation policy white book

Time Horizon

A five-year period in Transportation Policy White Book is defined as "short-term" while a 30-year period is "long-term".

Formulation Process

To formulate Transportation Policy White Book, a work team was first set up in the Institute of Transportation to prepare for the draft. A joint effort between the Institute of Transportation and the Chinese Institute of Transportation then conducted a series of policy issue seminars in which several subjects were discussed, such as goals, objectives, issues, policies and strategies. The draft was finally discussed in National Transportation Meeting, which includes representatives from government, academy, legislature, and industry to develop the final statement of National Transportation Policy.

Planning Procedures

Transportation policy serves as guidelines for the planning, development, and management of transportation system. Procedures to formulate the transportation policy include setting (1) goals, (2) policy directions, (3) outlines, (4) policies, and strategies, and (5) short-term measures and long-term prospectives(Figure 2).

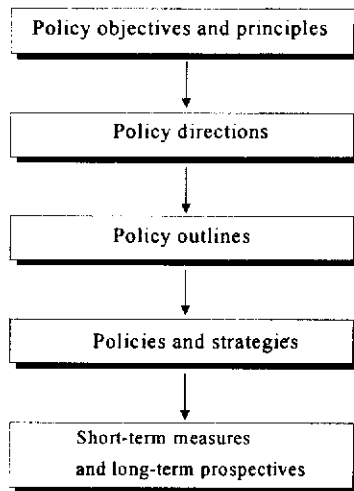


Figure 2. Planning procedures for the formulation of transportation policy

Goals, Objectives and Principles

Our transportation policy is to meet people's transportation needs subject to constraints of limited resources. Transportation needs can be reflected on people in their living, working, and recreational activities (figure 3).

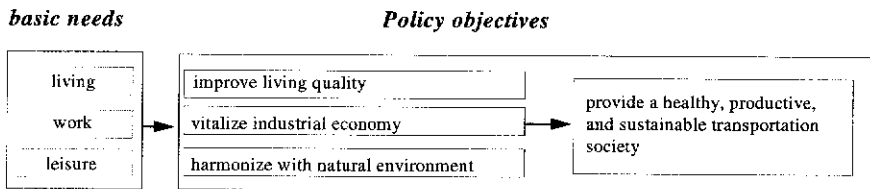


Figure 3. Development of objectives for transportation policy

Three major objectives of transportation policy are thus to improve living quality, to vitalize industrial economy, and to harmonize with natural environment based on transportation needs of the public (Figure 4). In summary, the overall goal of transportation policy is to create a healthy, productive and sustainable transportation society. Following these objectives, there are corresponding sub-objectives. For improving living quality, it is to provide an easy, safe, and comfortable transportation environment. For vitalizing industrial economy, it is to reduce freight transportation cost and increase the capability in international competition. For harmonizing with environment, it is to reduce pollution arising from transportation matters and to cooperate with urban development. The hierarchy of transportation policy objectives is shown in Figure 5.

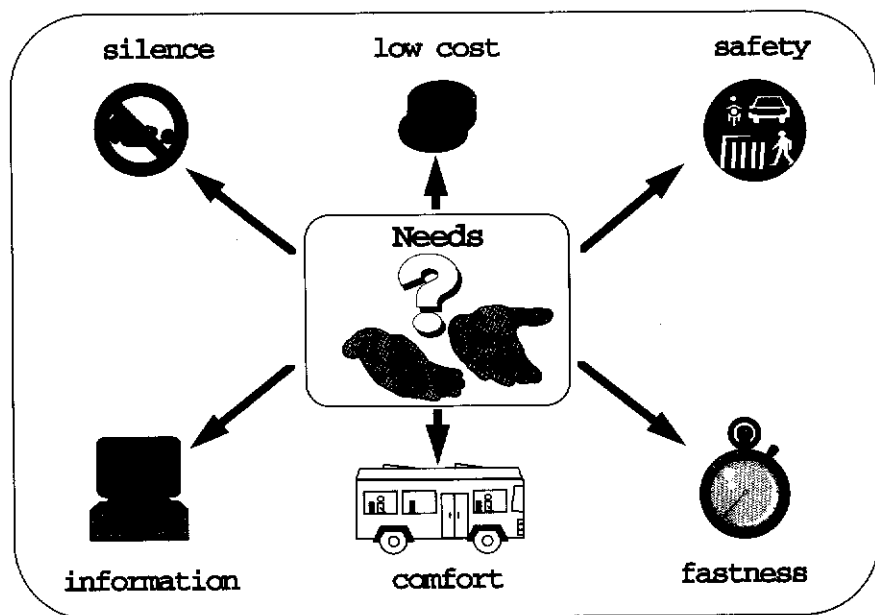


Figure 4. transportation needs of the public

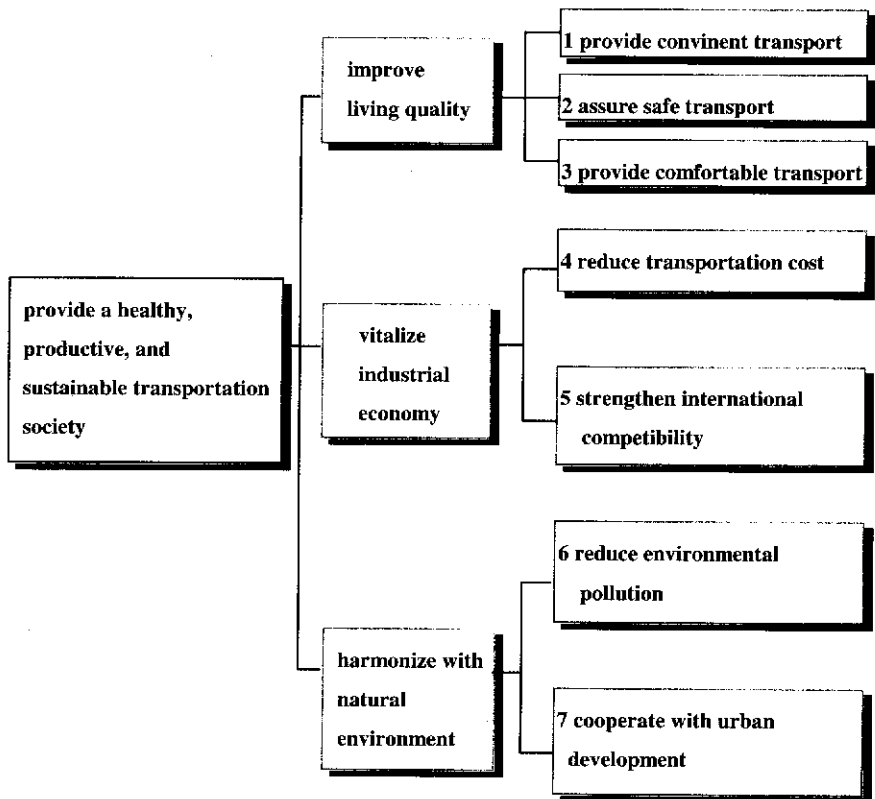


Figure 5. The hierarchy of transportation policy

To meet these objectives, five principles are incorporated to formulate transportation policy:

- (1) to meet peoples' needs and to cooperate with national development,
- (2) to effectively utilize resources and to consider social equity,
- (3) to solve transportation problems and to balance regional development,
- (4) to comply with market mechanism to reflect characteristics of demand and supply, and
- (5) to emphasize transportation safety and to assure environmental quality.

Policy Directions

As we face the challenges of a rapidly changing environment, we must adjust the past transportation system development. Twelve future policy directions are described as follows:

(1) Policy emphasis : from hardware construction to software management

In the past, transportation systems were more emphasized on construction rather than management. Consequently, transportation infrastructures are not efficiently utilized. More attention will be placed on transportation system management (TSM) and transportation demand management (TDM) to fully utilize existing transportation facilities.

(2) International transportation: from direct origin-destination transport to hub transport

The direct origin-destination type of transportation for import and export had been used in the past. However, the hub transport is the way of future. By taking the advantages of geographic position of Taiwan, it is essential to develop Taiwan into the air and sea transportation centers in the Asia-Pacific Region. This situation is shown in Figure 6.

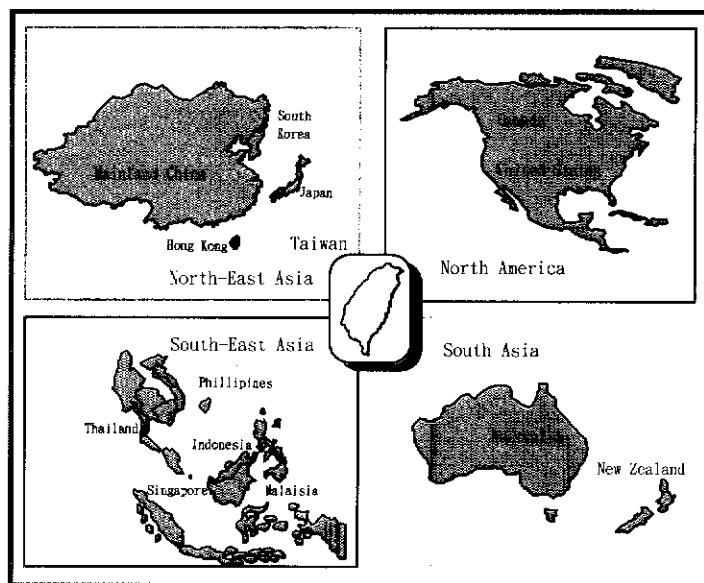
(3) Land transportation : from highway to railway

Most investments were placed in highway rather than railway previously, which concluded insufficiency of railway capacity and low service level. Due to the limitation of land, railway transportation with its high capacity and quality will be the future emphasis in Taiwan, R.O.C., to increase land transportation efficiency.

(4) Modal development : from private to public

In the past, private transportation had significantly increased due to poor service quality of public transportation. Consequently, traffic is congested and living quality is degraded. So public transportation will be the future solution to the traffic congestion issue in Taiwan, R.O.C.

Asia-Pacific Region



Transportation Corridor

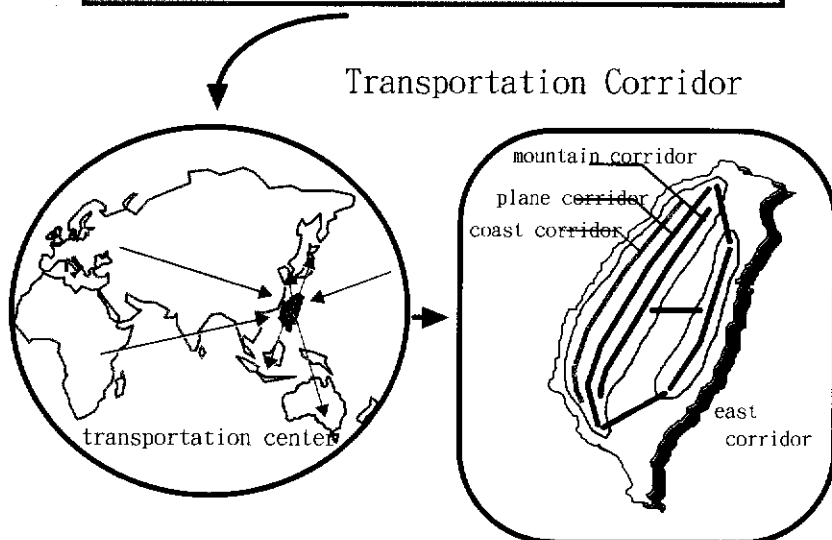


Figure 6. Asia-Pacific Region

(5) Transportation development : from urban to rural

In the past, transportation infrastructure has been more emphasized on the urban transportation system, with the result that the progress of transportation development in suburban and rural areas is far behind.

From now on, enhancing transportation development in suburban and rural areas and building a better transportation network system to balance regional development will be critical.

(6) Freight and passenger transportation : from single-mode transport to intermodal transport.

In the past, freight transportation mainly used the single mode to transport passenger and goods which results in high operation cost and inflexibility. To overcome this problem, the intermodal transportation system will be developed to provide a more efficient service.

(7) Transportation management : from regulation to deregulation

In the past, transportation market was tightly regulated and this may not fit the requirements of economic development, so transportation service quality is low. Due to too much control, illegal operations were developed in private sectors. In the future, market mechanism should be introduced into transportation market and invite more private sectors to join this market.

(8) Transportation operation : from public to private

Public operation was a main approach in public transportation market previously. This approach is less efficient, profitless, and does not provide good service to the public. The way of future is to change the type of operation from government-run to private-run.

(9) Transportation safety : from post-rescue to prevention

Transportation safety is a big issue in Taiwan; however, less attention has been paid to accident prevention in the past. So same types of accident are taken place again and again regardless of causality. From now on more attention will be paid to the accident prevention and emergency rescue systems.

(10) Transportation service : from general public to the disabled

Less care has been taken to the disabled such as the elderly and handicapped persons. Barrier-free environment will be the goal of future to improve service quality to the disabled.

(11) Transportation technology : from traditional to advanced technology

Traditional ways of transportation improvement may not lead to a major breakthrough in operation efficiency as well as safety. Improved data, communication, and information technology can make a significant contribution to the efficiency and performance of the transportation system. Using advanced technology can provide more opportunities for the improvement of transportation service quality and thus will be encouraged in the future.

(12) Transportation environment - from conflict to harmonization

In the past, more emphasis is put on the economic development. Environment impact issues were neglected while transportation facilities were improved. Harmonization with natural environment to assure a sustainable transportation is a must for the future transportation development.

Outlines of Transportation Policies

Transportation systems could consist of international transportation, intercity transportation, urban transportation, and suburban and rural transportation in terms of transportation market. By functions of transportation, there are transportation system development, operation and management, finance, safety, technology and environment. All these will be described as follows.

(1) International transportation

- **Development of air transportation** : Develop an integrated international airport master plan, continue the extension programs in CKS and Kaohsiung international airports, proceed CKS international airport as a airport transportation center plan, arrange designated express cargo areas, and improve airport ground transportation. Figure 7 expresses this conceptual scheme.

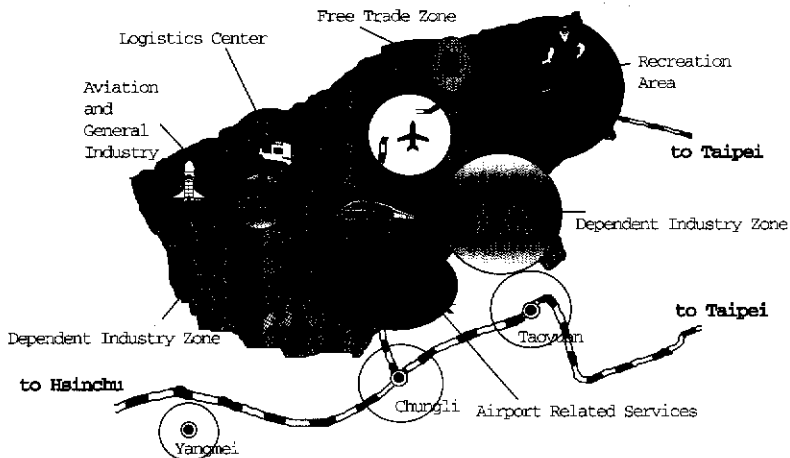


Figure 7. The conceptual illustration of the airport city

- **Development of sea transportation** : Develop an integrated international harbor master plan, continue the extension of existing programs in port construction, develop Kaohsiung port as a sea transportation center, promote Keelung and Taichung ports, develop vessel traffic management systems (VTMS), and improve port ground transportation. Figure 8 illustrates this conceptual scheme.

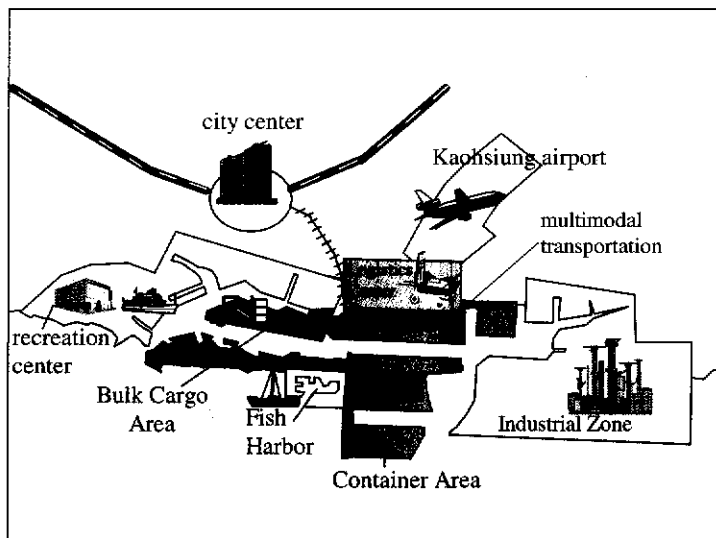


Figure 8. The conceptual illustration of the future port development

- **Institutional arrangement** : Set up a bureau of aviation under central government to administer the aviation policy, and establish a harbor management committee which is organized by central and local government offices, and the shipping industry.
- **Operation efficiency** : Speed up airport and port computerized operation/management systems, automate and standardize customs systems, simplify operating and custom procedures for passenger and freight transportation
- **Operation management** : Properly adjust rate of airport and port

to increase international competitiveness, privatize operation and management in airport and port services, and review or modify related regulations.

- **Personnel management** : Educate more professionals in aviation and ship control, provide a better system to manage port workers and ship workers.
- **Cross-strait direct shipping** : Match the national mainland policy, preschedule related measures of direct sea and air transportation, with the principles of: (1) sea transportation goes first and followed by air transportation, (2) cargo transportation goes first and followed by passenger transportation, and (3) the transfer transport goes first and followed by the direct transport.
- **Extend navigational rights** : Broaden international navigational lines, accelerate to update national airplanes and shipping vessels, and strengthen and interchange multi-national navigational rights.

(2) Intercity transportation

- **Integrated planning** : Cooperate with the national comprehensive development plan to develop an integrated intercity transportation development plan and create a "one-day" travel zone in Taiwan.
- **Roadway construction** : Build freeway and expressway networks and combine with local roads to create a high quality, efficient, and integrated road transportation system.
- **Roadway management** : Provide sufficient roadway information to roadway and public transportation users, perform highway congestion and incident management, utilize high occupancy vehicle (HOV) lane and the differential rate in highway control.
- **Railway construction** : Construct high speed rail, perform improvement and expansion plan of Taiwan Railway Administration's (TRA) facilities, integrate high speed rail and traditional rail to create an integrated railway transportation.
- **Railway management** : Appropriately restructure the TRA organization to improve operation efficiency.

- **Domestic aviation** : Perform the integrated domestic airport development plan and improve airport facilities to increase service quality.
- **Around-island sea transportation** : Create the third intercity transportation corridor by promoting the container transfer , bulk shipping transport, and tourism transport, and enhancing transfer functions of ports.
- **Intermodal transfer** : Set up intermodal transfer centers to integrate transport systems.
- **Construction management** : Establish computerized construction plans and bidding systems, and enhance construction management in schedule, cost, and quality.
- **Maintenance management** : Enhance maintenance quality by establishing maintenance management systems of bridge and tunnel and implementing pavement management systems.

(3)Urban transportation

- **Metropolitan area** : Continue to perform the under-going subway plan, mass rapid transit systems, integrate the commuter rail and bus system, and manage the use of road systems. The integration of commuter rail, mass rapid transit, and buses plays a major role in coordinating passenger transportation service and it is also assisted by the combinations of mass rail transit and private modes.
- **Local city** : To provide better service quality of buses and to clarify the functions of road systems are two main tasks in medium local cities. However, to improve accessibility is a major task in small rural cities.
- **Bus systems** : Re-arrange bus routes and stops, establish exclusive bus lanes and bus transfer centers, and help public transit agencies to obtain required land for related use.
- **Bus subsidies**: Reduce tax and discounted fare burden, assist bus replacement by buying new buses, and achieve ticket computerization.

- **Traffic management** : Adopt the demand management approach to reduce or shift travel demand. Improve traffic signal design, provide cargo loading/unloading areas and specific cargo transport routes. Establish a dedicated transportation agencies under local governments to handle traffic related problems and enforce traffic regulation.
- **Taxi management** : Set up taxi coordination committee, create the standard agreement between the taxi company and driver, establish taxi cooperative unions by legislation, generate review and evaluation systems of service quality.
- **Urban parking** : Enhance on-street parking management, provide more off-street parking spaces, encourage private participation in parking construction and operation, and enforce the crackdown of illegal parking.
- **Pedestrian systems** : Establish a human-based pedestrian system, improve walkway quality, and provide a barrier-free environment.

(4) Suburban and rural transportation

- **suburban transportation** : Plan and develop a local transportation system for each local living perimeter, establish maintenance and management systems of suburban transportation systems. Provide sufficient trip information to road users, review public transit routes and subsidize public transit capital investment and operation.
- **Off-shore transportation** : Relieve holiday traffic congestion, subsidize operation deficit and replacement of inter-island ships, and improve safety management in off-shore transportation.
- **Mountain area transportation** : Improve road quality and service quality of buses and increase accessibility.
- **Recreational transportation** : Consider landscape in developing access transportation systems for recreational areas, and provide tourist information systems.

(5)Transportation operation management

- **Deregulation**: Liberalize transportation industry in accordance with GATT guidelines, reduce or eliminate restrictions in bus and taxi industries.
- **Operations**: Review the fare system of airports, ports, and ground transportation and establish performance evaluation systems to assist transportation industries in increasing productivity.
- **Privatization**: Review existing regulations to facilitate corporatization and privatization.
- **Subsidies**: Provide financial assistance and reduce tax for public transportation industries.

(6)Transportation finances

- **Encourage private participation** : Encourage private sector to involve into the construction and operation of transportation infrastructure.
- **Collect funding** : Establish the transportation construction funding system.
- **Subsidize local government** : Review and revise existing financial support programs.

(7)Transportation safety

- **Safety organizations** : Perform national transportation safety organizations and strengthen functions in accident rescue, investigation, and inspection.
- **System operation** : Establish a transportation disaster rescue center to perform normally accident prevention, and set up disaster action plans and systems to analyze and diagnose transportation accident problems.
- **Safety management** : improve safety facilities and management systems, review safety related regulations, and educate people

- about safety issues.

(8)Barrier-free transportation

- **Transportation environment** : Establish a barrier-free transportation environment and modify transportation facilities to meet the elderly and the handicapped's needs.
- **Transportation facilities** : Provide barrier-free transportation modes, and revise related regulations, and provide the disabled a special and better service.

(9)Transportation technology

- **System development** : Adopt communication and computer technology to develop intelligent transportation systems.
- **Development items** : Develop advanced public transportation systems, advanced traffic management systems, advanced traveler information systems, and commercial vehicle operation systems.
- **Development stages**: Promote new transportation technology by ways of three steps: research and development, test and evaluation, and applications and promotion.

(10)Transportation environment

- **Reduce pollution** : adopt energy-saving and low-pollution transportation modes, and perform transportation demand management to reduce the usage of motorcycles and vehicles.
- **Mitigate impact** : establish site impact analysis systems to evaluate and control traffic and environment impact.

Transportation Policies

These twenty-eight policies cover areas of transportation system development, transportation operation and organization management, transportation technology, and transportation safety and environment are described as follows.

(1) International transportation

- Increase competitiveness of international sea transportation.

- Increase competitiveness of international air transportation.

(2) Intercity transportation

- Provide sufficient travel information to travelers.

- Expand and maintain transportation infrastructure.

- Establish intermodal transport systems.

- Efficiently utilize the transportation construction fund.

- Strengthen functions of operation management of passenger and freight transportation.

- Improve transportation order and introduce transportation demand management.

(3) Urban transportation

- Promote public transportation with the first priority.

- Enhance functions of urban transportation management.

- Improve urban parking facilities and service.

- Improve quality of urban environment.

- Establish barrier-free transportation systems.

- Strengthen urban transportation organizations.

- Improve operation management of taxi.
- Improve motorcycle management.

(4)Suburban and rural transportation

- Provide road information to road users.
- Improve suburban transportation systems.
- Improve rural access transportation.
- Improve transportation systems of recreational areas.
- Strengthen operation management of public transportation.
- Efficiently utilize transportation construction fund.

(5)Transportation safety

- Enhance functions of transportation safety organizations.
- Establish transportation safety systems.
- Improve roadway safety.
- Improve railroad safety.
- Improve safety of sea transportation.
- Improve safety of air transportation.

Transportation Strategies

(1) International transportation

- Promote international sea transportation competitiveness
 - Restructure organization of maritime administration, harbor, operation and management.
 - Draft the port city plan.
 - Improve port charge and management systems.
 - Increase port operating efficiency.
 - Expand capacity of international ports.
 - Promote competitiveness of national vessels and strengthen the relationship with other countries.
 - Properly react according to the change of international environment.
- Promote international air transportation competitiveness
 - Improve airport organization and management systems.
 - Plan the airport city.
 - Increase operating efficiency of international airports.
 - Expand capacity of international airports.
 - Expand international flight networks.
 - Properly react according to the change of international environment.

(2) Intercity transportation

- Provide sufficient travel information to travelers
 - Provide road traffic information to road users, as shown in Figure 9.
 - Provide sufficient transit information to public transit users.

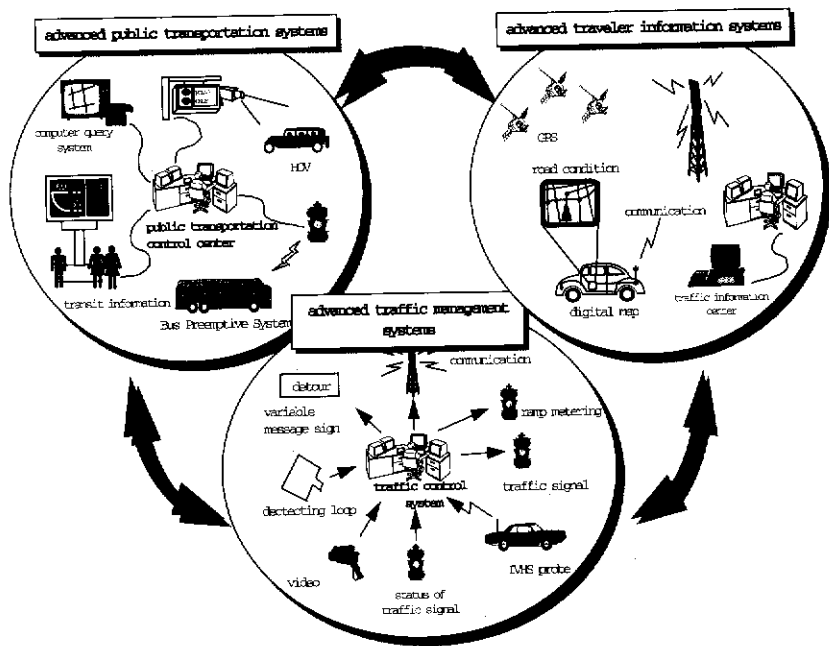


Figure 9. Intelligent vehicle and highway systems - provide road and trip information

- Expand and maintain transportation infrastructure
 - Cooperate with the national comprehensive development plan.
 - Enhance highway construction and maintenance.
 - Enhance railroad construction and maintenance.
 - Increase domestic civil aviation capacity.
 - Establish round-the-island shipping networks.
- Establish intermodal transport systems
 - Establish passenger and freight intermodal systems, as shown in Figure 10, figure 11 and figure 12.

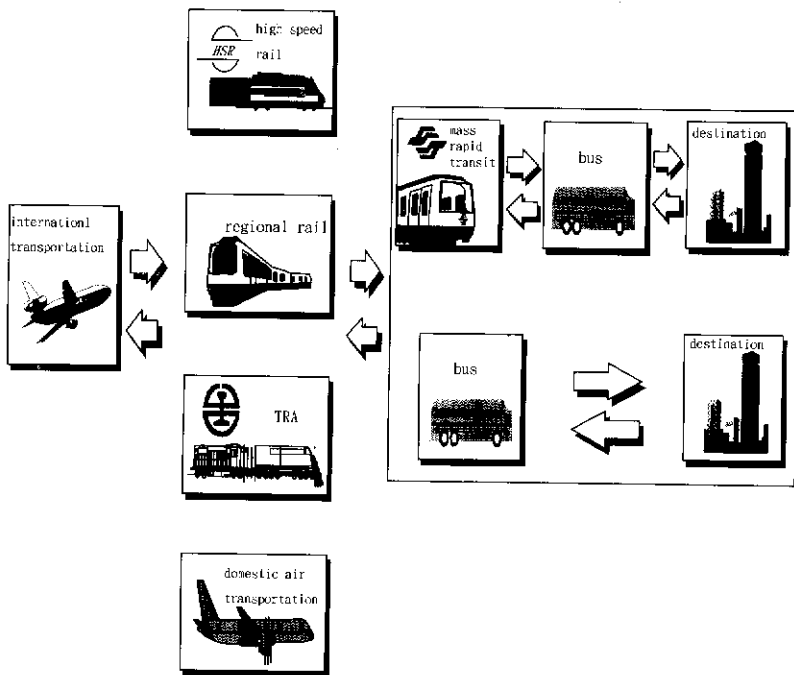


Figure 10. intermodal system for public transportation

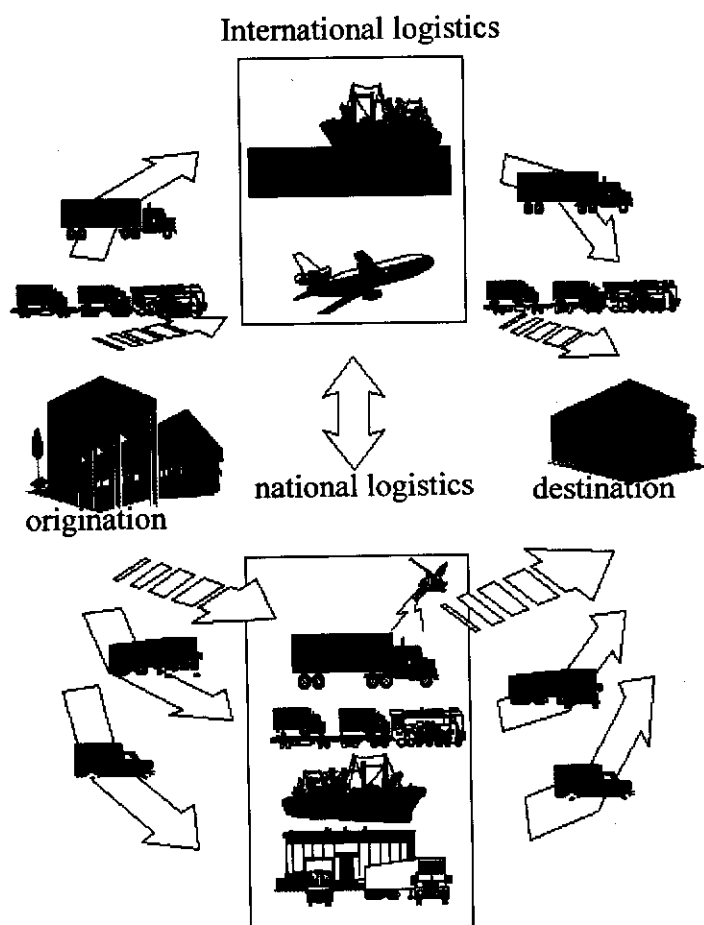


Figure 11. Intermodal system of freight transportation

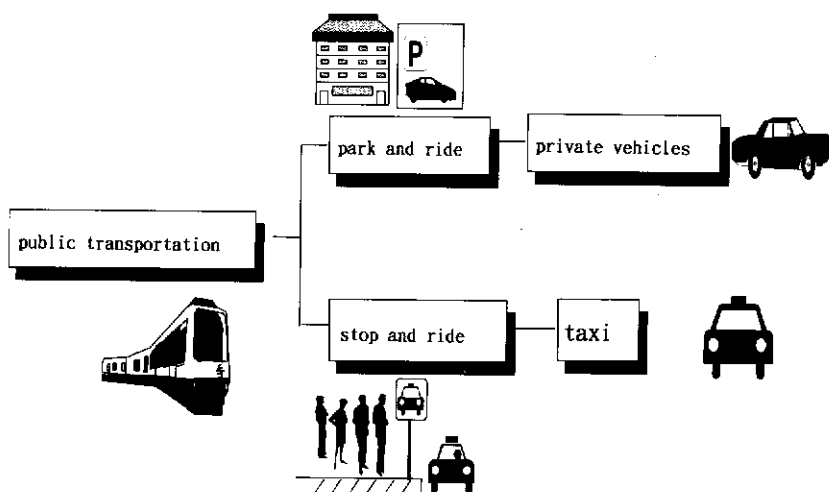


Figure 12. Intermodal system between public and private mode

- Efficiently utilize transportation construction financial recourses
 - Encourage private sector to participate in transportation infrastructure.
 - Establish the transportation infrastructure fund.
 - Establish transportation construction management systems.
- Strengthen operation management of passenger and freight transportation
 - deregulate transportation market and encourage privatization.
 - Increase operation efficiency.
 - Subsidize public transportation industries.
- Improve traffic order and introduce transportation demand management
 - Enhance truck traffic order, as shown in Figure 13.
 - Enhance traffic order of buses.
 - Adopt transportation demand management.

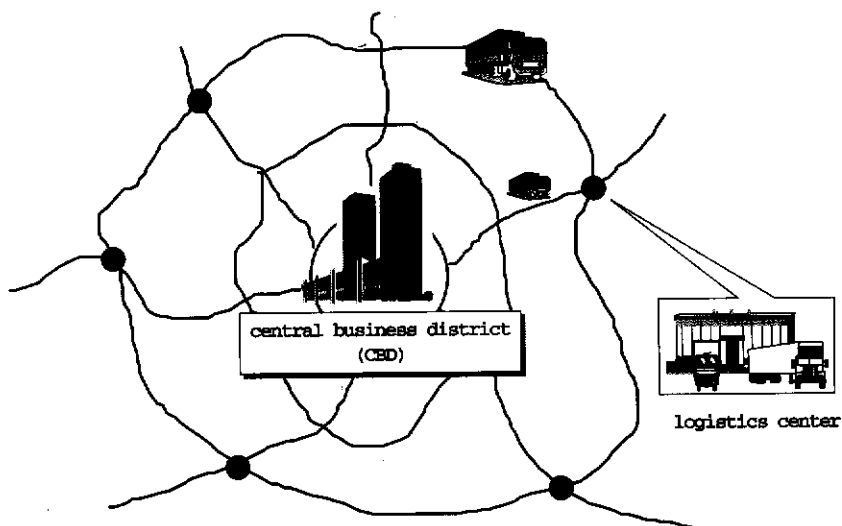


Figure 13. Urban road networks with consideration of heavy trucks

(3) Urban transportation

- Promote public development with the first priority
 - Establish comprehensive public transportation systems, as shown in Figure 14 and figure 15.
 - Improve financial difficulties of public transportation.
 - Improve operation environment of public transportation.
 - Promote operation efficiency in public transportation.
 - Enact the promotion regulations of public transportation.

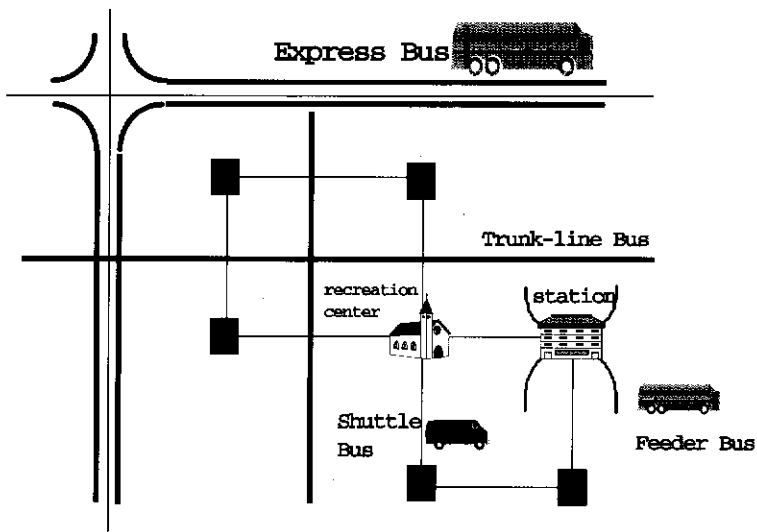


Figure 14. Urban bus networks

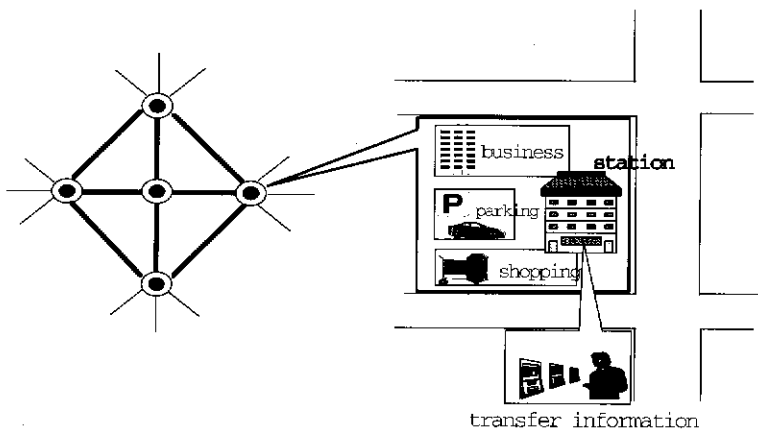


Figure 15. Public transportation transfer centers

- Enhance urban transportation management
 - * Establish planning and management systems for urban road systems, as shown in Figure 16 and figure 17.
 - * Enhance urban transportation demand management and law enforcement.

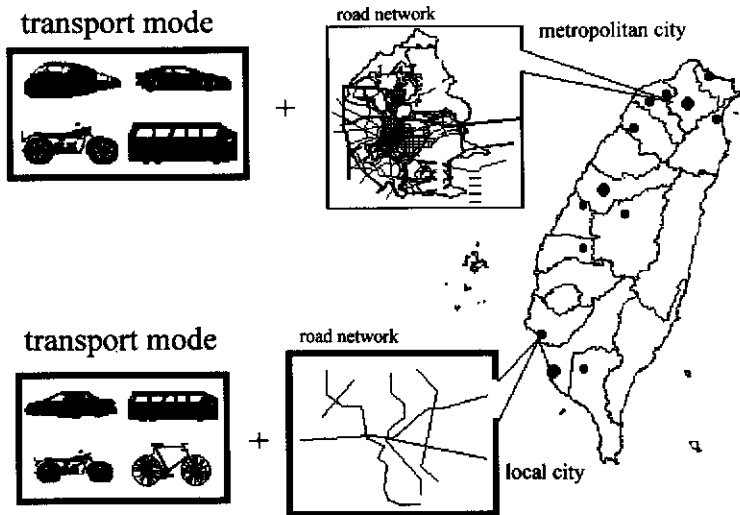


Figure 16. City road networks and transport modes for different city types

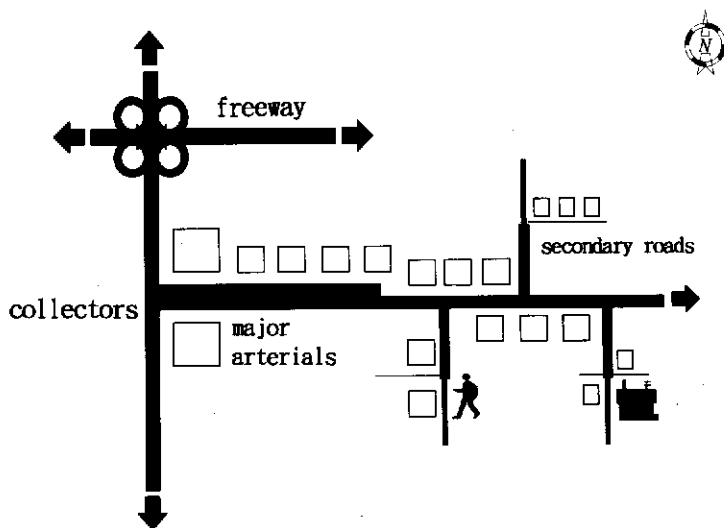


Figure 17. Road functions for urban road networks

- Improve urban parking facilities and service

- Provide off-street parking spaces.
- Effectively manage on-street parking.
- Enhance parking operation management.
- Collect sufficient parking construction funds.
- Improve quality of urban environment
 - Establish vehicle pollution-free programs.
 - Promote energy-saving and low-pollution transport modes.
- Establish barrier-free transportation systems
 - Develop a barrier-free transportation environment and living road networks, as shown in Figure 18.
 - Provide barrier-free transportation modes.

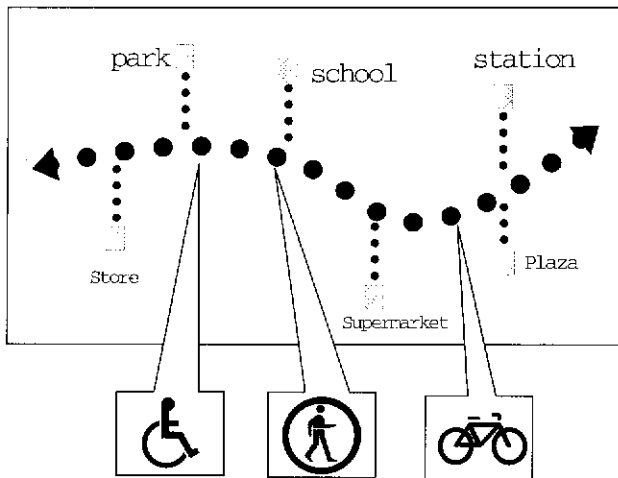


Figure 18. Establishment of urban road networks

- Strengthen functions of urban transportation organizations
 - Establish a dedicated traffic management organization.
 - Establish transportation construction subsidization systems.
- Improve taxi operation management
 - Establish taxi service quality evaluation systems.
 - Improve taxi management.
- Enhance motorcycle management
 - Construct motorcycle traveling networks.

- Improve motorcycle parking management.

(4) Suburban and rural transportation

- Provide sufficient travel information to travelers
 - Integrate road guidance systems.
 - Establish public transportation information systems.
- Improve suburban transportation systems
 - Plan overall transportation systems for the living perimeter.
 - Accelerate the improvement of roadway condition.
 - Perform roads and bridges maintenance management.
- Improve rural access transportation
 - Improve mountain area transportation systems.
 - Improve off-shore transportation systems.
- Improve transportation systems in recreational areas
 - Improve transportation service quality and safety.
 - Provide sight-seeing and transportation information.
- Strengthen management in public transportation
 - Promote public transportation programs.
- Efficiently utilize transportation financial resources
 - Improve construction funding allocation programs.

(5) Transportation safety

- Enhance the functions of transportation safety organizations
 - Enhance the functions of traffic safety supervision.
 - Enhance functions of traffic accident investigation.
 - Integrate the efforts of all rescue organizations.
 - Join international transportation safety organizations.
- Establish transportation safety systems
 - Establish transportation safety information systems.
 - Promote transportation safety supervision systems.
 - Promote transportation insurance systems.
 - Enhance functions of disaster prevention and rescue operation systems.

- Improve road safety
 - * Educate people with correct road safety concepts.
 - * Enhance drivers' driving safety management.
 - * Enhance motorcycle safety management.
 - * Enhance vehicle safety management.
 - * Enhance safety concerns in highway engineering.
 - * Promote techniques and functions of traffic accident investigation.
- Improve railroad safety
 - * Establish vehicle safety inspection systems.
 - * Enhance applications of adopting advanced transportation technologies.
 - * Improve safety aspects in railroad crossings.
 - * Educate more specialists in railroad safety.
- Improve sea transportation safety
 - * Enhance studies in maritime accidents.
 - * Enhance functions of service, monitoring, and law enforcement in maritime traffic safety.
 - * Extend the professional training to maritime affairs personnel.
- Improve air transportation safety
 - * Improve air traffic safety and accident prevention programs.
 - * Enhance supervising functions in air traffic safety.
 - * Enhance education and safety programs.

Short-Term Measures and Long-Term Prospectives

(1) The relationship of short-term measures and long-term vista

The short-term measure is a five-year plan, while the long-term prospective is in the future 30 years. The relationship between these two are:

- Long-term prospectives are the final target of a short-term measure.
- Short-term measures are the prerequisite of the long-term prospectives.

(2) Principles of formulating short-term measures

- On-going programs or plans.
- Serious problems which are urgently needed to be solved.
- Utmost needs of people.
- Foundation of middle and long-term prospectives.
- Low cost and high benefit.

(3) Short-term measures and long-term prospectives

Based on the principles and relationship between short-term measures and long-term prospectives previously described, these short and long-term items are defined according to different transportation characteristics, such as international transportation, inter-city transportation, urban transportation, sub-urban and rural transportation, and transportation safety.

- International transportation - table 1 to table 2.
- Intercity transportation - table 3 to table 8.
- Urban transportation - table 9 to table 16.
- Suburban and rural transportation - table 17 to table 22.
- Transportation safety - table 23 to table 28.

Table 1 International transportation policy (1) - Increase compatibility of international sea transportation

Restructure organization of maritime administration, harbor operation and management	<ul style="list-style-type: none"> ● Set up maritime administration ● Establish harbor management committee ● Promote privatization in terminal operations 	<ul style="list-style-type: none"> ○ Unification of maritime management ○ Integration among central government, local government, and private sectors ○ Privatization in port operations ○ Development of sea port cities
Draft the port city plan	<ul style="list-style-type: none"> ● Arrange a dedicated port area ● Plan to construct value-added large-scale operation facilities 	
Improve port charge and management systems	<ul style="list-style-type: none"> ● Establish appropriate port charge systems ● Review and revise related maritime regulations ● Improve maritime personnel education systems 	<ul style="list-style-type: none"> ○ Sound maritime management systems
Increase port operating efficiency	<ul style="list-style-type: none"> ● Change the management system of harbor workers ● Simplify customs operation procedures ● Improve port cargo movement procedures ● Perform automatic customs information systems ● Perform computerized and standardized port information systems ● Perform computerized and automatic load/unloading processes 	<ul style="list-style-type: none"> ○ Establishment of administration systems for harbor workers ○ Establishment of efficient port operation systems
Expand capacity of international ports	<ul style="list-style-type: none"> ● Proceed national port development plans ● Expedite national port expansion projects ● Perform vessel traffic management systems ● Speedup replacement of port facilities ● Plan intermodal transport systems of port, railroad, and road transportation 	<ul style="list-style-type: none"> ○ Development of comprehensive national port plans
Promote compatibility of	<ul style="list-style-type: none"> ● Expand and replace the national maritime fleet 	<ul style="list-style-type: none"> ○ Increase of the market share of national vessels

national vessels and strengthen the relationship with other countries	<ul style="list-style-type: none"> ● Expand the business scope of national vessels ● Strengthen relationship with other countries 	in the international maritime market
Properly react according to the change of international environment	<ul style="list-style-type: none"> ● Relax intermodal transport constraints of land and sea transportation ● Pre-plan cross-strait shipping measures of sea transportation ● Plan to expand deep-water port facilities 	<ul style="list-style-type: none"> ① Meet the liberalism requirement of GATT ① Match the national mainland policy in cross-strait direct shipping ① Provide facilities for large ships

Table 2 International transportation policy (2) - Increase competitiveness of international air transportation

Improve airport organization and management systems	<ul style="list-style-type: none"> ● Promote privatization of airport terminals and commercial services ● Promote privatization of airport cargo terminals and services ● Establish reasonable airport charge systems ● Educate more pilots and personnel in maintenance, safety control, and operation management ● Review and revise related aviation regulations ● Properly increase utilization of aviation operation 	<ul style="list-style-type: none"> ○ Sound air transportation management systems
Draft the airport city plan	<ul style="list-style-type: none"> ● Promote the CKS International Airport master plan ● Plan the land use development in airport adjacent areas 	<ul style="list-style-type: none"> ○ Development of the airport city
Increase operating efficiency of international airports	<ul style="list-style-type: none"> ● Simplify travelers' immigration procedures ● Promote automatic cargo customs systems ● Improve airport related logistic operations ● Arrange a dedicated express cargo area ● Develop integrated information systems for the air transportation center 	<ul style="list-style-type: none"> ○ Efficient and computerized operation in airports
Expand capability of international airports	<ul style="list-style-type: none"> ● Proceed the integrated international airport plan ● Expedite the second terminal construction plan ● Expand Kaohsiung international airport ● Plan transfer connections between domestic and international airports ● Prepare for new international airport plans ● Improve ground transportation systems 	<ul style="list-style-type: none"> ○ Establishment of CKS International Airport as an air transportation center
Expand international aviation	<ul style="list-style-type: none"> ● Expand the fleets of national aircrafts 	<ul style="list-style-type: none"> ○ Increase of the market share of national

networks	<ul style="list-style-type: none"> ● Expand international air traffic flight rights to other countries 	aircraft in international aviation market
Properly react according to the change of international environment	<ul style="list-style-type: none"> ● Pre-plan cross-strait measures of air transportation 	<ul style="list-style-type: none"> ○ Match the national mainland policy in cross-strait direct shipping

Table 3 Inter-city transportation policy (1) - Provide sufficient travel information to travelers

Strategic	Implementation	Target
Provide road traffic information to road users	<ul style="list-style-type: none"> ● Compile road user manuals including traffic signs and roadways ● Establish the national geographic database and management system of highway networks ● Establish detection, process, and real-time display systems of traffic data 	<ul style="list-style-type: none"> ○ Complete traffic information systems
Provide sufficient transit information to public transit users	<ul style="list-style-type: none"> ● Prepare transit user manuals for public transportation users ● Set up on-vehicle real-time information systems of public transportation ● Establish integrated terminal information systems of public transportation 	<ul style="list-style-type: none"> ○ Complete public transportation information systems

Table 4 Intercity transportation policy (2) - Expand and maintain transportation infrastructure

Cooperate with the national comprehensive development plan	<ul style="list-style-type: none"> ● Continue to proceed the integrated intercity transportation plan 	<ul style="list-style-type: none"> ○ Establishment of the "one-day" traffic living zone
Enhance highway construction and maintenance	<ul style="list-style-type: none"> ● Construct remaining routes of the second freeway ● Construct twelve east-west expressways ● Construct connective road networks between freeways and expressways ● Improve quality of primary, secondary, and connective roads ● Proceed the national island crossing expressway plan ● Establish management systems for highway, bridge, tunnel, and pavement 	<ul style="list-style-type: none"> ○ Complete road networks of freeways and expressways ○ Complete connective road networks of intercity, and local road transportation ○ Sound highway and bridge maintenance systems
Enhance railroad construction and maintenance	<ul style="list-style-type: none"> ● Subsidize the replacement of rail trains ● Promote the construction of high speed railway in the west corridor ● Build the passenger and freight railroad transfer centers ● Study the integration of current railway and high speed rail ● Enhance the maintenance work of railway facilities and bridges 	<ul style="list-style-type: none"> ○ A round-the-island railway network and its transfer systems ○ A high speed railway system ○ Sound railway and bridge maintenance systems
Enhance domestic civil aviation capacity	<ul style="list-style-type: none"> ● Proceed the integrated national aviation plan ● Expand airport facilities and navigation systems ● Proceed the airport ground transportation and parking facilities plan ● Proceed the national integrated airport development plan ● Improve maintenance work of airport facilities 	<ul style="list-style-type: none"> ○ A complete national aviation system ○ Improvement of airport ground transportation and parking facilities ○ Sound airport facilities maintenance systems
Establish round-the-island shipping network	<ul style="list-style-type: none"> ● Promote the container-transfer operation ● Promote round-the-island freight sea transportation 	<ul style="list-style-type: none"> ○ round-the-island passenger and freight sea transportation

	<ul style="list-style-type: none"> ● Promote round-the-island cruise ● Review capacity and usage of existing port facilities ● Improve maintenance work of port facilities 	<ul style="list-style-type: none"> ○ Sound port facilities maintenance systems
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Table 5 Intercity transportation policy (3) - Establish intermodal transportation systems

Strategy	Short-term measures	Long-term perspectives
Establish passenger and freight intermodal systems	<ul style="list-style-type: none"> ● Plan the transfer center for highway public transportation ● Plan the transfer system between railway and highway passenger transportation ● Plan the transfer system between railway and highway freight transportation ● Plan the intermodal system among different modes ● Plan the helicopter transportation transfer system ● Integrate the ticketing and network between railway and highway public transportation 	<ul style="list-style-type: none"> ○ Establishment of the transfer center for highway public transportation ○ Establishment of the transfer system between railway and highway freight transportation ○ Integrated intermodal transportation systems ○ Integrated intermodal transportation systems

Table 6 Intercity transportation policy (4) - Efficiently use transportation construction funds

Encourage private sectors to participate in transportation infrastructure	<ul style="list-style-type: none"> ● Encourage private sectors to participate in freeway construction and operation ● Encourage private sectors to participate in high speed rail construction and operation 	<ul style="list-style-type: none"> ○ Implementation regulations of private sectors participating transportation infrastructures
Establish transportation infrastructure funds	<ul style="list-style-type: none"> ● Promote the enactment of the regulation of national freeway construction fund management ● Promote the enactment of the regulation of high speed rail construction management fund 	<ul style="list-style-type: none"> ○ Establishment of the transportation construction fund utilization
Establish transportation construction management systems	<ul style="list-style-type: none"> ● Establish a computerized and transparent bidding system ● Establish a construction unit cost database ● Set up schedule, cost, and quality evaluation systems 	<ul style="list-style-type: none"> ○ Enhancement of transportation construction management systems ○ Enhancement of the effectiveness of construction investment

Table 7 Intercity transportation policy (5) - Enhance the operation management of passenger and freight transportation

Strategy	Short-term measures	Long-term perspectives
Deregulate transportation market and encourage privatization	<ul style="list-style-type: none"> ● Deregulate highway passenger and freight transportation markets ● Perform privatization in public-owned transportation business 	<ul style="list-style-type: none"> ○ Establishment of management systems of passenger and freight transportation industries
Increase operating efficiency	<ul style="list-style-type: none"> ● Develop and demonstrate "advanced public transportation systems ● Assist public transit agencies to adopt radio communications in operation management ● Properly adjust the T.R.A. and T.M.T.C.'s organization and financial structure ● Improve operation management of T.R.A. and T.M.T.C 	<ul style="list-style-type: none"> ○ Establishment of efficient passenger and freight transportation industries
Subsidize public transportation industries	<ul style="list-style-type: none"> ● Reduce related taxes for public transportation operators ● Subsidize the investment and operation of public transportation ● Adjust highway toll and perform differentiated rate policy ● Help public transportation operators to obtain the land of terminals ● Eliminate financial burdens due to social welfares of discounted tickets 	<ul style="list-style-type: none"> ○ Sound financial structure of passenger and freight transportation industries

Table 8 Intercity transportation policy (6) - Improve transportation order and transportation demand management

Enhance the traffic order of heavy trucks	<ul style="list-style-type: none"> ● Plan designated routes for heavy trucks ● Modify the truck loading limitations and the punishment standard ● Promote truck weigh-in-motion systems ● Enhance prosecution of heavy trucks' over-weight and over-speed violation ● Establish adequate heavy trucks certificate systems ● Establish automatic bus identification systems ● Enforce the crackdown of illegal bus operations 	<ul style="list-style-type: none"> ⊙ Establishment of heavy trucks management systems
Enhance traffic order of buses	<ul style="list-style-type: none"> ● Implement the ramp metering ● Implement the freeway high occupancy vehicles (HOV) plan ● Review the freeway "pricing" policy ● Develop and demonstrate advanced traffic management systems (ATMS) 	<ul style="list-style-type: none"> ⊙ Establishment of bus management systems
Adopt transportation demand management		<ul style="list-style-type: none"> ⊙ Balance of the usage of different transport modes

Table 9 Urban transportation policy (1) - Give priority to urban mass transit systems

Strategy	Short-term measures	Long-term perspective
Establish comprehensive mass transit systems	<ul style="list-style-type: none"> ● Construct mass rapid transit systems in the large metropolitan area ● Promote bus transit for medium local cities ● Integrate network and ticketing systems of mass transits ● Plan mass transit hub centers ● Continue to perform existing underground railway construction work 	<ul style="list-style-type: none"> ◎ Establishment of a healthy mass transit systems for large metropolitan and medium local cities ◎ Integration of mass transit systems
Improve financial difficulties of mass transit	<ul style="list-style-type: none"> ● Reduce tax for mass transit operators ● Subsidize the replacement of buses ● Subsidize computerized bus ticketing systems ● Subsidize deficit service routes 	<ul style="list-style-type: none"> ◎ A self-financing transit operator
Improve operation environment of mass transit	<ul style="list-style-type: none"> ● Properly adjust bus routes and stops ● Implement exclusive bus lanes ● Perform the bus pre-emptive system ● Assist mass transit operators to obtain land of bus terminals ● Improve terminal facilities of mass transit 	<ul style="list-style-type: none"> ◎ A healthy operation environment of mass transit
Promote operation efficiency of mass transit	<ul style="list-style-type: none"> ● Assist mass transit operators to introduce modern management skills ● Enhance marketing strategies of mass transit 	<ul style="list-style-type: none"> ◎ Strengthen operation ability of mass transit
Revise the related regulations of mass transit	<ul style="list-style-type: none"> ● Formulate evaluation and subsidy systems of mass transit ● Formulate regulations of promoting mass transit 	<ul style="list-style-type: none"> ◎ A city with mass transit oriented systems

Table 10 Urban transportation policy (2) - Enhance urban transportation management

Perform transportation demand management	<ul style="list-style-type: none"> ● Promote flexible working hours system ● Encourage of high occupancy vehicles (HOV) and ride-sharing programs ● Establish traffic impact of site development system ● Plan freight transport routes ● Improve urban traffic control facilities ● Develop and demonstrate advanced traffic management systems ● Establish traveler information systems ● Enhance traffic law enforcement 	<ul style="list-style-type: none"> ○ Establishment of urban transportation management systems
Establish urban road network and management systems	<ul style="list-style-type: none"> ● Plan an integrated urban express, arterials, and collectors road networks ● Revise the regulations for urban road management system ● Enhance urban road maintenance 	<ul style="list-style-type: none"> ○ A sound urban road plan and management system

Table 11 Urban transportation policy (3) - Improve urban parking facilities and service

Strategy	Short-term measures	Long-term perspectives
Provide off-street parking spaces	<ul style="list-style-type: none"> ● Construct more off-street parking spaces ● Provide more off-street parking spaces in buildings ● Encourage car buyers to prepare their own parking spaces 	<ul style="list-style-type: none"> ○ Minimize the gap between supply and demand of parking spaces
Effectively manage on-street parking	<ul style="list-style-type: none"> ● Enhance planning and management of on-street parking ● Plan the no parking areas ● Establish a towing system for illegal parking ● Enhance the crackdown of illegal parking 	<ul style="list-style-type: none"> ○ Off-street parking as a primary mean
Enhance parking operation management	<ul style="list-style-type: none"> ● Enforce the crackdown of illegal parking around public parking facilities ● Plan the parking information systems ● Enhance functions of parking organizations 	<ul style="list-style-type: none"> ○ A sound parking operation environment
Raise sufficient parking construction funds	<ul style="list-style-type: none"> ● Raise construction funds for more parking spaces ● Encourage private sectors to build public parking spaces 	<ul style="list-style-type: none"> ○ Sufficient parking construction funds

Table 12 Urban transportation policy (4) - Improve quality of urban environment

Establish vehicle pollution-free programs	<ul style="list-style-type: none"> ● Improve the procedures of abandoning unserviceable vehicles ● Proceed to inspect emission systems of motorcycles ● Set up a joint team to perform on-street vehicle emission inspection 	⊙ Decrease of the environmental impact of using vehicles and motorcycles
Promote energy-saving and low-pollution transport modes	<ul style="list-style-type: none"> ● Promote the use of liquefied petroleum gas (LPG) vehicles ● Promote researches in electronic vehicles and motorcycles 	⊙ Decrease of transportation energy consumption and pollution

Table 13 Urban transportation policy (5) - Establish barrier-free transportation systems

Develop barrier-free transportation environment and living road networks	<ul style="list-style-type: none"> ● Improve barrier-free walking facilities and management ● Revise related road engineering standards ● Market the concept of barrier-free walking environment ● Improve the quality of barrier-free walking facilities ● Encourage the study of the disabled facilities 	⊙ A human-respect transportation environment
Provide barrier-free transportation modes	<ul style="list-style-type: none"> ● Enhance the management and promotion of barrier-free facilities ● Revise related regulations of barrier-free facilities ● Market the concept of barrier-free service ● Provide a barrier-free environment to the elderly and the disabled 	⊙ A barrier-free transportation environment

Table 14 Urban transportation policy (6) - Strengthen functions of urban transportation organizations

Establish specialized traffic management organization	● Increase specialized staff	⊙ Establishment of specialized traffic management organization
Establish transportation construction funding systems	● Formulate a comprehensive transportation construction funding program	⊙ Establishment of a sound funding systems

Table 15 Urban transportation policy (7) - Improve operation management of taxi

Establish taxi service quality evaluation systems	● Perform survey of taxi operation and service level ● Establish evaluation systems of service quality of taxi drivers	⊙ Provision of high taxi service quality
Improve taxi management	● Improve management systems of taxi companies ● Conditionally open personal taxi license ● Improve the management of taxi radio communications ● Formulate standard contract between taxi drivers and taxi companies ● Promote taxi corporation associations	⊙ Healthy taxi management systems

Table 16 Urban transportation policy (8) - Improve motorcycle management

Establish motorcycle traveling networks	<ul style="list-style-type: none"> ● Plan motorcycle restriction areas ● Provide separated lanes for vehicles and motorcycles ● Properly modify the related design in traffic engineering 	⊙ A smooth traffic flow
Improve motorcycle parking management	<ul style="list-style-type: none"> ● Review and plan designated parking areas for motorcycles ● Establish motorcycle parking fee systems 	⊙ A good order of motorcycle parking

Table 17 Suburban and rural transportation policy (1) - Provide road information to road users

Provide road guidance systems	<ul style="list-style-type: none"> ● Provide bus route booklets ● Establish national geographic database and management systems of national highway networks 	⊙ A well-designed roadway guidance system
Establish public transportation information systems	<ul style="list-style-type: none"> ● Prepare public transportation user manuals ● Establish an integrated public transportation terminal system 	⊙ A well-designed public transportation traveler system

Table 18 Suburban and rural transportation policy (2) - Improve suburban transportation systems

Suburban and rural transportation policy (2) - Improve suburban transportation systems		Urban and suburban transportation policy (2) - Improve urban transportation systems	
Plan comprehensive transportation systems for the living perimeter	<ul style="list-style-type: none">● Implement road development plans for each living perimeter● Promote comprehensive transportation plans for each living perimeters		○ A well-planned suburban transportation system
Expedite to improve roadway condition	<ul style="list-style-type: none">● Upgrade service level of road service● Widen and improve narrow or poorly-designed roads		○ Improvement of road service quality
Perform roads and bridges maintenance management	<ul style="list-style-type: none">● Repair the existing old and dangerous bridges● Establish road and bridge management systems		<ul style="list-style-type: none">○ Ensurance of bridges safety○ A sound roadway maintenance management system

Table 19 Suburban and rural transportation (3) - Improve access of rural transportation

Improve mountain area transportation systems	<ul style="list-style-type: none"> ● Design subsidy program for public transportation in rural areas ● Encourage para-transit in mountain areas ● Plan the helicopter transportation system ● Plan roadway improvement programs in mountain areas ● Improve transportation safety facilities and management in mountain roads ● Improve service quality of public transportation in mountain areas 	◎ Good quality and safe transportation in mountain areas
Improve off-shore transportation systems	<ul style="list-style-type: none"> ● Improve service quality of public transportation in rural areas during the peak period ● Position the off-shore ports and organizations ● Formulate the subsidy measures of off-shore transportation ● Encourage to develop public transportation in off-shore areas ● Plan the helicopter transportation system ● Improve management of traffic safety facilities ● Formulate subsidy of public transportation in off-shore areas ● Improve service quality of buses by increasing the number of service routes and providing new facilities 	◎ Good quality and safe transportation in off-shore areas

Table 20 Sub-urban and rural transportation policy (4) - Improve transportation systems of recreational areas

Improve transportation service quality and safety to recreational areas	<ul style="list-style-type: none"> ● Plan a comprehensive access roads network to recreational areas ● Improve access roads to recreational areas ● Improve parking facilities in recreational areas 	③ Easy access to recreational areas
Provide sight-seeing and transportation information	<ul style="list-style-type: none"> ● Improve road signs in recreational areas ● Set up tourist information centers ● Design tourist information books 	③ Good tourist information systems

Table 21 Sub-urban and rural transportation (5) - Strengthen operation management of public transportation

Promote public transportation programs	<ul style="list-style-type: none"> ● Reduce related taxes of public transportation operators ● Subsidize investment and operation cost for public transportation operators ● Eliminate or reduce discount tickets for social welfare ● Subsidize operation deficit of service routes ● Assist public transportation operators to obtain the terminal land ● Improve parking and terminal facilities of public transportation ● Formulate evaluation and subsidy systems ● Plan public transportation transfer centers ● Organize a public transit routes application review committee 	③ A good public transportation system
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Table 22 Sub-urban and rural transportation (6) - Efficiently utilize transportation construction funds

Improve construction funding allocation programs	<ul style="list-style-type: none"> ● Establish an efficient funding application procedure ● Establish reasonable funding allocation criteria ● Perform the specific use of funding system 	③ A balance transportation development between urban and rural areas
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Table 23 Transportation safety policy (1) - Enhance functions of transportation safety organizations

Strengthen functions of traffic safety supervision	<ul style="list-style-type: none"> ● Strengthen functions of national traffic safety supervision committee ● Organize technical committees before organizing "national transportation safety committee" ● Set up aircraft aviation safety committee 	⊙ Establishment of national transportation safety committee
Strengthen functions of traffic accident investigation	<ul style="list-style-type: none"> ● Review positions and functions of accident inspection organizations ● Review functions and operation procedures of TRA's safety committee ● Enhance functions and operations of maritime evaluation committee ● Review functions and operations of air traffic accident investigation organization 	⊙ Establishment of national transportation safety systems
Integrate operation functions of all rescue organizations	<ul style="list-style-type: none"> ● Joint effort from public and private sectors to perform emergency rescue tasks ● Set up a united rescue control center to utilize resources efficiently ● Expand rescue channels and prepare emergency communication booklets 	⊙ Establishment of united operation functions for search and rescue
Join international transportation safety organizations	<ul style="list-style-type: none"> ● Assist private sectors to join international safety related organizations ● Assist national air traffic safety foundation to participate in international safety conferences and share real-time safety information 	⊙ Enhancement of understanding international safety related affairs

Table 24 Transportation policy (2) - Establish transportation safety systems

Strategic	Sub/Item/Action	Long-term objectives
Establish transportation safety information systems	<ul style="list-style-type: none"> ● Modify accident report forms to collect more detailed accident information ● Formulate maritime accident report forms to collect accident information ● Enhance tasks in accident analysis and prediction ● Establish severe accident databases and perform accident analysis 	<ul style="list-style-type: none"> ⊙ Establishment of national transportation management information systems
Promote transportation safety supervision systems	<ul style="list-style-type: none"> ● Establish transportation safety indices and set up "exceptional management" systems ● Strengthen functions of transportation safety training ● Establish driving diary systems of large trucks' drivers 	<ul style="list-style-type: none"> ⊙ Establishment of transportation safety monitoring systems
Promote transportation insurance systems	<ul style="list-style-type: none"> ● Promote legislation of mandatory automobile liability insurance ● Promote the revision of existing insurance system ● Promote insurance systems for recreation boats and fishing boats 	<ul style="list-style-type: none"> ⊙ Establishment of traffic accident insurance policy systems
Enhance disaster prevention and rescue operation systems	<ul style="list-style-type: none"> ● Set up transportation disaster and rescue centers ● Implement transportation disaster and rescue programs 	<ul style="list-style-type: none"> ⊙ Establishment of national transportation disaster and rescue systems

Table 25 Transportation safety policy (3) - Improve roadway safety

Educate people with correct road safety concepts	<ul style="list-style-type: none"> ● Educate people to understand the right-of-way ● Guide motorcycle drivers' to wear helmet while driving ● Educate drivers about correct vehicle maintenance concepts ● Educate people about the incident rescue process and correct medical treatment ● Improve re-education procedures of drivers' violation 	<ul style="list-style-type: none"> ○ Establishment of correct traffic safety concepts
Enhance driver safety management	<ul style="list-style-type: none"> ● Improve written and driving tests ● Revise the content and style of written tests ● Enhance the monitoring and management function of driving schools ● Revise hazardous goods transport procedures and management systems ● Implement the gravel truck safety management program ● Perform drug investigation of illegal drivers 	<ul style="list-style-type: none"> ○ Establishment of driver management systems
Enhance motorcycle safety management	<ul style="list-style-type: none"> ● Enhance motorcycle driving order ● Promote the legislation for motorcycle drivers to wear helmet 	<ul style="list-style-type: none"> ○ Establishment of motorcycle safety management systems
Enhance vehicle safety management	<ul style="list-style-type: none"> ● Promote vehicle maintenance and inspection systems ● Train more vehicle maintenance technicians ● Improve professional technician license systems ● Gradually perform vehicle safety certificate systems 	<ul style="list-style-type: none"> ○ Establishment of vehicle safety management systems
Enhance safety concerns in highway engineering	<ul style="list-style-type: none"> ● Improve public transportation safety facilities for the disabled ● Apply the human factor in highway safety engineering design ● Define safety-related traffic engineering standards ● Extend the accident prone location improvement plan ● Improve traffic safety at working zone 	<ul style="list-style-type: none"> ○ Application of safety concepts in roadway design

Promote techniques and functions of traffic accident investigation	<ul style="list-style-type: none"> ● Establish a systematic approach to train accident investigation professionals ● Establish a designated accident investigation committee ● Improve techniques and quality of accident investigation 	<ul style="list-style-type: none"> ○ Enhancement of roadway accident investigation techniques and functions
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Table 26 Transportation safety policy (4) - Improve railroad safety

Establish vehicle safety inspection systems	<ul style="list-style-type: none"> ● Review the railroad transportation inspection system ● Expedite the replacement of old trains 	<ul style="list-style-type: none"> ○ Establishment of a well-organized railroad transportation safety systems
Adopt advanced transportation technologies	<ul style="list-style-type: none"> ● Improve railroad safety and security-related measures ● Establish railroad construction management systems ● Renew traffic control equipments ● Actively participate in international railroad organizations 	<ul style="list-style-type: none"> ○ Establishment of railroad transportation safety systems
Improve safety in railroad crossings	<ul style="list-style-type: none"> ● Improve safety of railroad crossings ● Construct more railroad elevated crossing 	<ul style="list-style-type: none"> ○ Improvement of railroad crossing safety
Educate more specialists in railroad safety	<ul style="list-style-type: none"> ● Improve railroad employees' professional training 	<ul style="list-style-type: none"> ○ Enhancement of the railroad personnel training and management

Table 27 Transportation safety policy (5) - Improve safety of sea transportation

Enhance studies in maritime accidents	<ul style="list-style-type: none"> ● Resume the research activities of the international maritime research group ● Revise outdated maritime regulations ● Aggressively join international corporation projects ● Amend the maritime laws according to international regulations ● Establish maritime statistics and analysis systems 	⊙ Establishment of safety systems in sea transportation
Enhance functions of service, monitoring, and law enforcement in maritime traffic safety	<ul style="list-style-type: none"> ● Provide better services and management in vessel navigation systems ● Establish a ship inspection organization which can be contracted to private sectors 	⊙ Establishment of safety management systems in sea transportation
Extend the professional training to maritime affair personnel	<ul style="list-style-type: none"> ● Provide routine ship investigation and professional training programs ● Provide safety seminars and training programs to maritime personnel 	⊙ Enhancement of quality of maritime safety personnel

Table 28 Transportation safety policy (6) - Improve safety of air transportation

Goal	Specific measures	Expected results
Increase air traffic safety and accident prevention programs	<ul style="list-style-type: none"> ● Re-examine and amend outdated related aviation laws ● Inspect the definition of air transportation safety index ● Establish aviation accident prevention systems 	<ul style="list-style-type: none"> ○ Establishment of air transportation safety systems
Enhance supervising functions in air traffic safety	<ul style="list-style-type: none"> ● Establish procedures of inspection and punishment for violation ● Promote automatic air traffic control systems ● Establish the evaluation system for airport emergency operations ● Strengthen air traffic operations and aircraft inspection systems ● Coordinate with related organizations to re-organize the air traffic control over the limited air-space 	<ul style="list-style-type: none"> ○ Establishment of air transportation safety management systems
Enhance education programs and safety programs	<ul style="list-style-type: none"> ● Provide seminars or training courses to safety control personnel ● Provide air transportation safety related courses in colleges or universities 	<ul style="list-style-type: none"> ○ Enhancement of quality of aviation safety personnel